

What is claimed is:

1. A constant velocity universal joint comprising:
a cylindrical outer member connected to a transmission
5 shaft, said outer member having guide grooves separated from
each other by a predetermined spacing distance and extending
in an axial direction on an inner circumferential surface of
said outer member; and

10 an inner member connected to another transmission shaft,
said inner member being inserted into an opening in said
outer member, said inner member including trunnions each
having a spherical surface and annular members each having a
spherical recess adapted to receive said spherical surface,

15 wherein a cutout surface is formed on a part of said
spherical surface of said trunnion, to which no torque is
applied.

20 2. A constant velocity universal joint according to
claim 1, wherein said cutout surface comprises a flat
surface.

25 3. A constant velocity universal joint according to
claim 2, wherein said cutout surface comprises a pair of
opposite flat surfaces.

4. A constant velocity universal joint according to
claim 1, wherein said cutout surface comprises a recess or a

bore.

5 5. A constant velocity universal joint according to
claim 4, wherein said cutout surface comprises a pair of
opposite bores.

10 6. A constant velocity universal joint according to
claim 1, wherein said cutout surface comprises a flat
surface separating said spherical surface formed in a
circumferential direction of said trunnion.

15 7. A constant velocity universal joint according to
claim 6, wherein said cutout surface comprises a pair of
opposite flat surfaces.

20 8. A constant velocity universal joint according to
claim 1, wherein said cutout surface comprises a curved
surface formed in a circumferential direction of trunnion.

25 9. A constant velocity universal joint according to
claim 8, wherein said cutout surface comprises a pair of
opposite curved surfaces.

 10. A constant velocity universal joint according to
claim 9, wherein width of said curved surface is decreased
gradually from a substantially central portion toward both
ends of said curved surface in said circumferential

direction.

11. A constant velocity universal joint comprising:

5 a cylindrical outer member connected to a transmission shaft, said outer member having guide grooves separated from each other by a predetermined spacing distance and extending in an axial direction on an inner circumferential surface of said outer member; and

10 an inner member connected to another transmission shaft, said inner member being inserted into an opening in said outer member, said inner member including trunnions each having a spherical surface and annular members each having a spherical recess adapted to receive said spherical surface,

15 wherein a pair of cutout surfaces each comprising at least a flat surface, a curved surface, or a composite surface of a flat surface and a curved surface are formed on opposite parts of said spherical surface of said trunnion, to which no torque is applied, and

20 wherein said spherical recess is formed in a perfectly circular opening of said annular member.

12. A constant velocity universal joint comprising:

25 a cylindrical outer member connected to a transmission shaft, said outer member having guide grooves separated from each other by a predetermined spacing distance and extending in an axial direction on an inner circumferential surface of said outer member; and

an inner member connected to another transmission shaft,
said inner member being inserted into an opening in said
outer member, said inner member including trunnions each
having a spherical surface and annular members each having a
spherical recess adapted to receive said spherical surface,

wherein a substantially disk-shaped head is formed by
cutting out a part of said spherical surface of said
trunnion ,

wherein a pair of cutout surfaces each comprising at
least a flat surface, a curved surface, or a composite
surface of a flat surface and a curved surface are formed on
opposite parts of a band-shaped circumferential surface of
said disk-shaped head of said spherical surface of said
trunnion, to which no torque is applied, and

wherein said spherical recess is formed in a perfectly
circular opening of said annular member.